APPLICATION NO 10601386

August 24, 2004

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CLMPTO CLAIMS 1-5 (CANCELLED)

- 6. A method for validating the position of a word line overlaying a trench capacitor, comprising the steps of: providing a wafer having at least one scribe line region and a memory cell region;
 - forming a test key in the scribe line region and a plurality of memory cells in the memory cell region, wherein the test key comprises:
 - a trench capacitor deposited in the scribe line region and has a buried plate;
 - a rectangular word line deposited in the scribe line region and covers a portion of the trench capacitor;
 - a first and second passing word line deposited
 above the trench capacitor;
 - a first and second doping region respectively deposited between the rectangular word line and the first passing word line, and the

rectangular word line and the second passing word line;

- a first plug coupled to the first doping region;
- a second plug coupled to the second doping region;
 and
- a third plug coupled to the buried plate;
- measuring a first current between the first and third plug resulting from applying a predetermined voltage difference between the first and third plug, applying a predetermined voltage level on the rectangular word line and floating the second plug, and a second current between the second and third plug resulting from applying predetermined voltage difference between the second and third plug, applying the predetermined voltage level on the rectangular word line and floating the first plug; and
- validating the position of the rectangular word line by the measured first and second currents.
- 7. The method as claimed in claim 6, wherein the test key further comprises a fourth plug coupled to the rectangular word line.
- 8. The method as claimed in claim 6 further comprising the step of:
 - validating the position of rectangular word lines in the memory cells by the validation results of the rectangular word lines in the test key.

9. The method as claimed in claim 6, wherein widths of the first and second passing word lines are substantially the same, and substantially smaller than a width of the rectangular word line.

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10. The method as claimed in claim 6, wherein a width of the rectangular word line is approximately 0.6 $\mu\,m$